



Highway Safety Improvement Program
Data Driven Decisions

West Virginia
Highway Safety Improvement Program
2014 Annual Report

Prepared by: WV

Disclaimer

Protection of Data from Discovery & Admission into Evidence

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

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Executive Summary

West Virginia's Highway Safety Improvement Program is coordinated by the Mobility and Safety Section of the WVDOH's Traffic Engineering Division. The Section is responsible for reviewing and evaluating any project that is a candidate for highway safety funds. The initial review and evaluation of a potential project will include the analysis of crash data for the location, a field review of the site, and the collection of any other information found appropriate to evaluate the proposed project.

Once a positive safety benefit is determined to exist for a project, the methodology discussed later is used to select and prioritize projects for the State's HSIP. Once a project is selected for the HSIP, the Section is responsible for selecting an HSIP funding category for the project and submitting appropriate programming documents where HSIP funds are encumbered and projects are assigned to the State's Statewide Transportation Improvement Program (STIP). The Mobility and Safety Section remains responsible for monitoring and balancing the use of HSIP funds, and evaluating the effectiveness of a project following its completion.

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP MAP-21 Reporting Guidance dated February 13, 2013 and consists of four sections: program structure, progress in implementing HSIP projects, progress in achieving safety performance targets, and assessment of the effectiveness of the improvements.

Program Structure

Program Administration

How are Highway Safety Improvement Program funds allocated in a State?

Central

District

Other

Describe how local roads are addressed as part of Highway Safety Improvement Program.

West Virginia Division of Transportation maintains approximately ninety-five percent (95%) of the roads in the State, including all secondary or county routes. As such, all HSIP funds are typically used for highway safety projects on State Highway System. Very few of the State's municipalities own city streets. These are typically lower volume and do not have significant numbers of fatal or serious injury crashes occurring on them; however, should a safety concern exist on a municipal street, the project would be eligible to compete for available HSIP funds.

Identify which internal partners are involved with Highway Safety Improvement Program planning.

- Design
- Planning
- Maintenance
- Operations
- Governors Highway Safety Office
- Other:

Briefly describe coordination with internal partners.

Maintenance and operations identify potential objects throughout the state. They contact the Mobility and Safety Section to see if safety funds can be used to fund the proposed projects. Often during road safety assessments, their expertise is often sought for potential solutions to found safety issues.

Once a project is programmed, it is often the responsible of the design division to prepare all necessary plans for the project. The Mobility and Safety Section will provide them with the proposed location of the improvement and provide any necessary expertise throughout the design phase. Planning Division helps coordinate with all external partners, mainly the Metropolitan Planning Organizations.

Identify which external partners are involved with Highway Safety Improvement Program planning.

- Metropolitan Planning Organizations
- Governors Highway Safety Office
- Local Government Association
- Other:

Identify any program administration practices used to implement the HSIP that have changed since the last reporting period.

Multi-disciplinary HSIP steering committee

Other: Other-no change

Describe any other aspects of Highway Safety Improvement Program Administration on which you would like to elaborate.

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Once a positive safety benefit is determined to exist for a project, the methodology is used to select and prioritize projects for the State's HSIP. Once a project is selected for the HSIP, the Section is responsible for selecting an HSIP funding category for the project and submitting appropriate programming documents where HSIP funds are encumbered and projects are assigned to the State's Statewide Transportation Improvement Program (STIP). The Mobility and Safety Section remains responsible for monitoring and balancing the use of HSIP funds, and evaluating the effectiveness of a project following its completion.

Program Methodology

Select the programs that are administered under the HSIP.

Median Barrier

Intersection

Safe Corridor

Horizontal Curve

Bicycle Safety

Rural State Highways

Skid Hazard

Crash Data

Red Light Running Prevention

Roadway Departure

Low-Cost Spot Improvements

Sign Replacement And Improvement

Local Safety

Pedestrian Safety

Right Angle Crash

- Left Turn Crash
 Shoulder Improvement
 Segments
- Other:

Program: Roadway Departure

Date of Program Methodology: 9/17/2007

What data types were used in the program methodology?

Crashes

- All crashes
 Fatal crashes only
 Fatal and serious injury crashes only
 Other

Exposure

- Traffic
 Volume
 Population
 Lane miles
 Other

Roadway

- Median width
 Horizontal curvature
 Functional classification
 Roadside features
 Other

What project identification methodology was used for this program?

- Crash frequency
 Expected crash frequency with EB adjustment
 Equivalent property damage only (EPDO Crash frequency)
 EPDO crash frequency with EB adjustment
 Relative severity index

- Crash rate
- Critical rate
- Level of service of safety (LOSS)
- Excess expected crash frequency using SPFs
- Excess expected crash frequency with the EB adjustment
- Excess expected crash frequency using method of moments
- Probability of specific crash types
- Excess proportions of specific crash types
- Other

Are local roads (non-state owned and operated) included or addressed in this program?

- Yes
- No

If yes, are local road projects identified using the same methodology as state roads?

- Yes
- No

How are highway safety improvement projects advanced for implementation?

- Competitive application process
- selection committee
- Other

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Relative Weight in Scoring Rank of Priority Consideration Ranking based on B/C Available funding 1 Incremental B/C Ranking based on net benefit Other

What proportion of highway safety improvement program funds address systemic improvements?

25

Highway safety improvement program funds are used to address which of the following systemic improvements?

 Cable Median Barriers Rumble Strips Traffic Control Device Rehabilitation Pavement/Shoulder Widening Install/Improve Signing Install/Improve Pavement Marking and/or Delineation Upgrade Guard Rails Clear Zone Improvements Safety Edge Install/Improve Lighting Add/Upgrade/Modify/Remove Traffic Signal Other

What process is used to identify potential countermeasures? Engineering Study Road Safety Assessment Other:**Identify any program methodology practices used to implement the HSIP that have changed since the last reporting period.** Highway Safety Manual Road Safety audits Systemic Approach Other: Other-no change**Describe any other aspects of the Highway Safety Improvement Program methodology on which you would like to elaborate.**

The overall purpose of the HSIP is to achieve a significant reduction in traffic fatalities and incapacitating injuries through the implementation of infrastructure related highway safety improvements. Components of West Virginia's HSIP include the Strategic Highway Safety Program

(SHSP), the Highway Safety Improvement Program (HSIP), the High Risk Rural Roads Program (HRRRP), the Railway-Highway Grade Crossing Program (HRGX) and the Penalty Transfer (OCRO).

The High Risk Rural Road Program (HRRRP) no longer has a set aside amount, and was absorbed by the larger HSIP. In West Virginia, the HRRRP is managed through the Traffic Engineering Division' Traffic Mobility and Safety Section, as a part of the overall HSIP. Rural collectors or rural local roads generally correlate to the county route highway class and WVDOH maintains all of the State's more than 28,000 miles in country routes. The State has been able allocate HSIP funds to some of the routes; however, as County Routes are the most rural and low-volume of the highway classes they often lose out when competing for funding against projects on routes in higher classifications. The availability of HRRRP funding has provided WVDOH with the ability to combat this problem by utilizing HRRRP funding to implement safety improvements on routes within this system which have fatal and/or serious injury crash rates above the statewide average for county routes.

Progress in Implementing Projects

Funds Programmed

Reporting period for Highway Safety Improvement Program funding.

Calendar Year

State Fiscal Year

Federal Fiscal Year

Enter the programmed and obligated funding for each applicable funding category.

Funding Category	Programmed*		Obligated	
	49512690	74 %	15556808	
HRRRP (SAFETEA-LU)	1629800	2 %	1837800	10 %
	0	0 %	0	
Penalty Transfer - Section 154	15935606	24 %	1333400	7 %
	0	0 %	0	
Incentive Grants - Section 163	0	0 %	0	0 %
	0	0 %	0	
Other Federal-aid Funds (i.e. STP, NHPP)	0	0 %	0	0 %

Totals	67078096	100%	18728008	100%
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How much funding is programmed to local (non-state owned and maintained) safety projects?

\$908,000.00

How much funding is obligated to local safety projects?

\$908,000.00

How much funding is programmed to non-infrastructure safety projects?

\$6,989,500.00

How much funding is obligated to non-infrastructure safety projects?

\$6,989,500.00

How much funding was transferred in to the HSIP from other core program areas during the reporting period?

\$0.00

How much funding was transferred out of the HSIP to other core program areas during the reporting period?

\$0.00

Discuss impediments to obligating Highway Safety Improvement Program funds and plans to overcome this in the future.

West Virginia has observed several impediments to obligating Highway Safety Improvement Program funds. First, many throughout the DOH origination are not familiar with the safety program. Often they are unaware that there are potential funds to correct a safety problem. Second, even though the Mobility and Safety Section is responsible for monitoring and balancing the use of HSIP funds, they do not handle the design of the project. We have found that people who are responsible for the design of the project have too much work. Often these people have other projects from other core programs.

To overcome this, member of the Mobility and Safety Section are attempting to reach out to the districts and other division to familiarize them with the safety program. They are also keeping contact with people who are responsible for the design during the entire process and checking with their workload before assigning the design of the project to them.

Describe any other aspects of the general Highway Safety Improvement Program implementation progress on which you would like to elaborate.

Nothing to add.

General Listing of Projects

List each highway safety improvement project obligated during the reporting period.

Project	Improvement Category	Output	HSIP Cost	Total Cost	Funding Category	Functional Classification	AADT	Speed	Roadway Ownership	Relationship to SHSP	
										Emphasis Area	Strategy
Jerry Dove I/C Lighting	Lighting Site lighting - interchange	1 Miles	2356900	2618800	HSIP (Section 148)	Rural Principal Arterial - Interstate	42000	70	State Highway Agency	Roadway Departure	
Wayne CR 52/4	Roadside Barrier- metal	2 Miles	147500	163900	HSIP (Section 148)	Rural Local Road or Street	450	25	State Highway Agency	Roadway Departure	
US 50 / WV 18 Traffic Light	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	21000	21000	HSIP (Section 148)	Rural Principal Arterial - Other	7700	65	State Highway Agency	Intersections	
Kanawha Turnpike Signal	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	20150	20150	HSIP (Section 148)	Urban Minor Arterial	9200	35	State Highway Agency	Intersections	
Hampshire County High	Intersection traffic control Systemic improvements - signal-	1 Numbers	12020	13360	HSIP (Section 148)	Rural Minor Arterial	7800	45	State Highway Agency	Intersections	

School	controlled										
US 33 / WV 92 Traffic Signal	Intersection traffic control Systemic improvements - signal-controlled	1 Numbe rs	23670 0	23670 0	HSIP (Section 148)	Rural Principal Arterial - Other	1350 0	65	State Highway Agency	Intersectio ns	
US 50 / WV 18 Traffic Light	Intersection traffic control Systemic improvements - signal-controlled	1 Numbe rs	95265 5	95265 5	HSIP (Section 148)	Rural Principal Arterial - Other	7700	65	State Highway Agency	Intersectio ns	
Jefferson Lighting	Lighting Continuous roadway lighting	2 Miles	86434 8	10804 35	HSIP (Section 148)	Urban Principal Arterial - Other	2500 0	50	State Highway Agency	Roadway Departure	
CR 45/5 Left Turn Lane	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbe rs	13500 0	15000 0	HSIP (Section 148)	Rural Minor Arterial	9600	45	State Highway Agency	Intersectio ns	
5th and 13th I/S Improvement	Pedestrians and bicyclists Install new crosswalk	2 Numbe rs	19370 0	21520 0	HSIP (Section 148)	Urban Principal Arterial - Other	3620 0	40	State Highway Agency	Pedestrian s	
Washington Street Lighting	Lighting Intersection lighting	1 Numbe rs	13561 00	15068 00	HSIP (Section 148)	Rural Principal Arterial - Other	1100 0	55	State Highway Agency	Intersectio ns	

Glenville Roundabout	Intersection traffic control Modify control - two-way stop to roundabout	1 Numbers	21600 0	24000 0	HSIP (Section 148)	Rural Minor Arterial	6300	35	State Highway Agency	Intersectio ns	
Cheylan Bridge Signals	Intersection traffic control Modify traffic signal - modernization/replacement	3 Numbers	31870 0	31870 0	HSIP (Section 148)	Urban Principal Arterial - Other	1200 0	40	State Highway Agency	Intersectio ns	
Wood WV 2 TWLTL	Intersection geometry Auxiliary lanes - add two-way left-turn lane	1 Miles	18000	20000	HSIP (Section 148)	Rural Principal Arterial - Other	1300 0	55	State Highway Agency	Intersectio ns	
Wood WV 2 TWLTL	Intersection geometry Auxiliary lanes - add two-way left-turn lane	1 Miles	54000 0	60000 0	HSIP (Section 148)	Rural Principal Arterial - Other	1300 0	55	State Highway Agency	Intersectio ns	
East Huntington Signal System	Intersection traffic control Modify traffic signal - modernization/replacement	12 Numbers	90000	10000 0	HSIP (Section 148)	Urban Principal Arterial - Other	1200 0	35	State Highway Agency	Intersectio ns	
WV 25 OP - 40th St Bridge	Roadway Pavement surface - high friction surface	1 Miles	69689 5	77432 8	HSIP (Section 148)	Urban Principal Arterial -	5750 0	70	State Highway Agency	Roadway Departure	

HFST						Interstate					
Fort Hill - Kanawha Blvd OP	Roadway Pavement surface - high friction surface	1 Miles	57765 6	64184 0	HSIP (Section 148)	Urban Principal Arterial - Interstate	7600 0	60	State Highway Agency	Roadway Departure	
John Deere Curve HFST	Roadway Pavement surface - high friction surface	1 Miles	14830 0	16480 0	HSIP (Section 148)	Rural Principal Arterial - Other	1600	55	State Highway Agency	Roadway Departure	
Glade Creek - Bragg	Roadway Rumble strips - edge or shoulder	3 Miles	45655	90060 0	HSIP (Section 148)	Rural Principal Arterial - Interstate	1200 0	70	State Highway Agency	Roadway Departure	
Sandstone - Green Sulphur Springs	Roadway Rumble strips - edge or shoulder	2 Miles	37800	10662 14	HSIP (Section 148)	Rural Principal Arterial - Interstate	1100 0	70	State Highway Agency	Roadway Departure	
US 460 - Old Cumberland Road	Roadway Rumble strips - edge or shoulder	3 Miles	23000	10372 00	HSIP (Section 148)	Rural Principal Arterial - Other	1040 0	40	State Highway Agency	Roadway Departure	
Ambrose Lane - Halls Ridge	Roadway Rumble strips - edge or shoulder	1 Miles	15730 0	20292 00	HSIP (Section 148)	Urban Principal Arterial -	1460 0	55	State Highway Agency	Roadway Departure	

						Other					
Pineville - Jesse Road	Roadway Rumble strips - edge or shoulder	2 Miles	14600 0	88355 2	HSIP (Section 148)	Rural Minor Arterial	4400	55	State Highway Agency	Roadway Departure	
Prosperity - Bradley Road	Roadway Rumble strips - edge or shoulder	2 Miles	28269 4	88903 0	HSIP (Section 148)	Urban Minor Arterial	5000	40	State Highway Agency	Roadway Departure	
Morgantown Road	Roadway Rumble strips - edge or shoulder	2 Miles	22500 0	13215 60	HSIP (Section 148)	Rural Principal Arterial - Other	2100 0	55	State Highway Agency	Roadway Departure	
Bridgeport - Grafton Road	Roadway Rumble strips - edge or shoulder	1 Miles	39580 0	16667 38	HSIP (Section 148)	Urban Minor Arterial	5800	55	State Highway Agency	Roadway Departure	
Sarah - Melissa	Roadway Rumble strips - edge or shoulder	1 Miles	14129	22420 0	HSIP (Section 148)	Rural Minor Arterial	5600	55	State Highway Agency	Roadway Departure	
Hughes Branch	Roadway Rumble strips - edge or shoulder	4 Miles	11500	62950 0	HSIP (Section 148)	Rural Major Collector	1300	30	State Highway Agency	Roadway Departure	
Long Branch - Dothan Road	Roadway Rumble strips - edge or shoulder	2 Miles	17603 4	59940 0	HSIP (Section 148)	Rural Minor Arterial	2300	45	State Highway Agency	Roadway Departure	

Sheperston Pike	Roadway Rumble strips - edge or shoulder	2 Miles	58269	54790 0	HSIP (Section 148)	Rural Major Collector	3600	45	State Highway Agency	Roadway Departure	
Route 9 West Berkeley Springs	Roadway Rumble strips - edge or shoulder	2 Miles	10560 7	75562 4	HSIP (Section 148)	Rural Major Collector	1300	55	State Highway Agency	Roadway Departure	
Princeton - Athens Road	Roadway Rumble strips - edge or shoulder	2 Miles	19713 6	82705 6	HSIP (Section 148)	Urban Minor Arterial	8900	40	State Highway Agency	Roadway Departure	
McKees Creek - Kentucky Road	Roadway Rumble strips - edge or shoulder	1 Miles	31543	12641 39	HSIP (Section 148)	Rural Major Collector	6600	35	State Highway Agency	Roadway Departure	
Birch River - Braxton County Line	Roadway Rumble strips - edge or shoulder	3 Miles	10430 0	53448 00	HSIP (Section 148)	Rural Principal Arterial - Other	1100 0	65	State Highway Agency	Roadway Departure	
Peterstown - Lindsie Road	Roadway Rumble strips - edge or shoulder	2 Miles	24274 3	76387 8	HSIP (Section 148)	Rural Principal Arterial - Other	3800	55	State Highway Agency	Roadway Departure	
Ambler Ridge - KcKown	Roadway Rumble strips - edge or shoulder	2 Miles	33581	56133 4	HSIP (Section 148)	Rural Major Collector	2300	55	State Highway Agency	Lane Departure	

Creek											
Rupert - Apple Road	Roadway Rumble strips - edge or shoulder	2 Miles	14929 3	87880 0	HSIP (Section 148)	Rural Minor Arterial	7700	35	State Highway Agency	Roadway Departure	
Grade Road	Roadway Rumble strips - edge or shoulder	2 Miles	66894	64960 0	HSIP (Section 148)	Urban Major Collector	3800	35	State Highway Agency	Roadway Departure	
Greenshoal - Harts	Roadway Rumble strips - edge or shoulder	3 Miles	32703	41253 9	HSIP (Section 148)	Rural Minor Arterial	3700	55	State Highway Agency	Roadway Departure	
Nine Mile - Branchland	Roadway Rumble strips - edge or shoulder	3 Miles	50533	58438 0	HSIP (Section 148)	Rural Minor Arterial	2700	55	State Highway Agency	Roadway Departure	
Edray - Scenic Highway	Roadway Rumble strips - edge or shoulder	2 Miles	22800	71740 0	HSIP (Section 148)	Rural Principal Arterial - Other	1250	55	State Highway Agency	Roadway Departure	
Bland Hills - Reeds Creek	Roadway Rumble strips - edge or shoulder	3 Miles	26198 4	96110 0	HSIP (Section 148)	Rural Minor Arterial	1000	55	State Highway Agency	Roadway Departure	
Frametown - Gassaway Road	Roadway Rumble strips - edge or shoulder	2 Miles	11947 2	44753 8	HSIP (Section 148)	Rural Major Collector	1800	55	State Highway Agency	Roadway Departure	

US 119 - Lenore	Roadway Rumble strips - edge or shoulder	2 Miles	38807	704398	HSIP (Section 148)	Rural Major Collector	3500	45	State Highway Agency	Roadway Departure	
Naugatuck - US 119	Roadway Rumble strips - edge or shoulder	3 Miles	31916	772650	HSIP (Section 148)	Rural Principal Arterial - Other	4000	55	State Highway Agency	Roadway Departure	
I-77 - Mink Shoals	Roadway Rumble strips - edge or shoulder	4 Miles	230171	3989800	HSIP (Section 148)	Urban Principal Arterial - Interstate	34000	70	State Highway Agency	Roadway Departure	
Freedom Way Road	Roadway Rumble strips - edge or shoulder	1 Miles	9400	367200	HSIP (Section 148)	Urban Minor Arterial	6000	40	State Highway Agency	Roadway Departure	
District 6 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbers	559900	799900	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 4 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbers	795100	1135800	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 3 Roadway Striping	Roadway delineation Longitudinal pavement	1 Numbers	661400	944900	HSIP (Section	Rural Principal Arterial -			State Highway	Roadway Departure	

	markings - remarking	rs			148)	Other			Agency		
District 2 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	74740 0	10680 00	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 1 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	70510 0	10073 00	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 5 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	82790 0	11827 00	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 7 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	70230 0	10034 00	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 8 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	57920 0	82740 0	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
District 9 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	70500 0	10071 00	HSIP (Section 148)	Rural Principal Arterial -			State Highway Agency	Roadway Departure	

						Other					
District 10 Roadway Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	81520 0	11646 00	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
D-1 Recall Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	13750 5	13750 5	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
D-2 Recall Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	13814 7	13814 7	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
D-3 Recall Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	13809 4	13809 4	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
D-4 Recall Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	14399 0	14399 0	HSIP (Section 148)	Rural Principal Arterial - Other			State Highway Agency	Roadway Departure	
D-5 Recall Striping	Roadway delineation Longitudinal pavement markings - remarking	1 Numbe rs	18436 6	18436 6	HSIP (Section 148)	Rural Principal Arterial -			State Highway Agency	Roadway Departure	

						Other					
D2 and D3 Lane Departure	Roadway Pavement surface - high friction surface	1 Numbers	16300	16300	HRRRP (SAFETE A-LU)	Rural Major Collector			State Highway Agency	Roadway Departure	
Advance Warning Flashers	Intersection traffic control Intersection flashers - add advance intersection warning sign-mounted	3 Numbers	16300	16300	Penalty Transfer - Section 154	Urban Principal Arterial - Other	1980	55	State Highway Agency	Intersections	
Guardrail Cacapon Mountain	Roadside Barrier- metal	1 Miles	30050	30050	Penalty Transfer - Section 154	Rural Major Collector	1300	55	State Highway Agency	Roadway Departure	
US 250, Glendale 7th Street	Roadway Roadway widening - travel lanes	1 Miles	90800	90800	Penalty Transfer - Section 154	Urban Local Road or Street	5000	25	State Highway Agency	Intersections	
Kanawha WV 501 Signs	Roadway signs and traffic control Roadway signs (including post) - new or updated	3 Miles	10000	10000	Penalty Transfer - Section 154	Urban Minor Arterial	4200	55	State Highway Agency	Roadway Departure	
Statewide Radio Project	Non-infrastructure Outreach	1 Numbers	50000	50000	Penalty Transfer - Section	Statewide			State Highway Agency	Drivers	

					154						
RPM 2014	Roadway delineation Raised pavement markers	3 Numbe rs	37130 6	37130 6	Penalty Transfer - Section 154	statewide			State Highway Agency	Roadway Departure	
WV 9 / WV 115 / CR 32 Intersectio n	Lighting Site lighting - intersection	1 Numbe rs	39540 0	39540 0	Penalty Transfer - Section 154	Rural Minor Arterial	1030 0	55	State Highway Agency	Intersectio ns	
Renovate Traffic Signal	Intersection traffic control Modify traffic signal - modernization/replace ment	1 Numbe rs	22930 0	22930 0	Penalty Transfer - Section 154	Rural Minor Arterial	4900	35	State Highway Agency	Intersectio ns	
First Response Training	Non-infrastructure Educational efforts	1 Numbe rs	25000 0	25000 0	Penalty Transfer - Section 154	Statewide			State Highway Agency	Drivers	
US 250 Guardrail	Roadside Barrier- metal	1 Miles	77000	77000	Penalty Transfer - Section 154	Urban Principal Arterial - Other	3100	35	State Highway Agency	Roadway Departure	
Emily Drive Design	Miscellaneous	1 Numbe rs	15000 0	15000 0	Penalty Transfer - Section	Urban Minor	3200 0	45	State Highway	Intersectio ns	

Study		rs			154	Arterial			Agency		
US 119 / CR 73 Traffic Study	Non-infrastructure Transportation safety planning	1 Numbers	225000	225000	Penalty Transfer - Section 154	Urban Principal Arterial - Other	18800	50	State Highway Agency	Intersectio ns	
Tucker WV 38 Signs	Roadway signs and traffic control Roadway signs (including post) - new or updated	10 Miles	25000	25000	Penalty Transfer - Section 154	Rural Major Collector	700	55	State Highway Agency	Roadway Departure	
US 33 Feasibility Study	Miscellaneous	12 Miles	50000	50000	Penalty Transfer - Section 154	Rural Minor Arterial	5000	55	State Highway Agency	Data	
Video Analytics / Detection	Non-infrastructure Non-infrastructure - other	1 Numbers	379500	379500	Penalty Transfer - Section 154	Statewide			State Highway Agency	Data	
US 52 / WV 123 Intersection Improvement	Intersection traffic control Modify traffic signal timing - left-turn phasing (permissive to protected/permissive)	1 Numbers	50000	50000	Penalty Transfer - Section 154	Rural Principal Arterial - Other	10900	45	State Highway Agency	Intersectio ns	
Davis Dynamic	Advanced technology and ITS Dynamic	2 Numbe	75000	75000	Penalty Transfer	2 locations			State Highway	Data	

Message Signals	message signs	rs			- Section 154				Agency		
WV 114 Guardrail	Roadside Barrier- metal	4 Miles	90000	90000	Penalty Transfer - Section 154	Urban Minor Arterial	11200	50	State Highway Agency	Roadway Departure	
Interstate 79 Guardrail	Roadside Barrier- metal	1 Miles	50000	50000	Penalty Transfer - Section 154	Rural Principal Arterial - Interstate	11500	70	State Highway Agency	Roadway Departure	
WV 4 Braxton Co - Guardrail	Roadside Barrier- metal	1 Miles	12000	12000	Penalty Transfer - Section 154	Rural Major Collector	4900	45	State Highway Agency	Roadway Departure	
Intersection Control	Intersection traffic control Intersection flashers - add stop sign-mounted	1 Numbers	78000	78000	Penalty Transfer - Section 154	Rural Principal Arterial - Other	1700	55	State Highway Agency	Roadway Departure	
WV 51 Centerline Rumble	Roadway Rumble strips - center	11 Miles	170000	170000	Penalty Transfer - Section 154	Rural Major Collector	6100	55	State Highway Agency	Roadway Departure	
Traffic Incident Managememe	Non-infrastructure Educational efforts	1 Number	900000	1000000	HSIP (Section	Statewide			State Highway	Training	

nt		rs			148)				Agency		
Statewide Safety Campaign	Non-infrastructure Outreach	1 Numbe rs	45233 42	50260 00	HSIP (Section 148)	Statewide			State Highway Agency	Training	

Progress in Achieving Safety Performance Targets

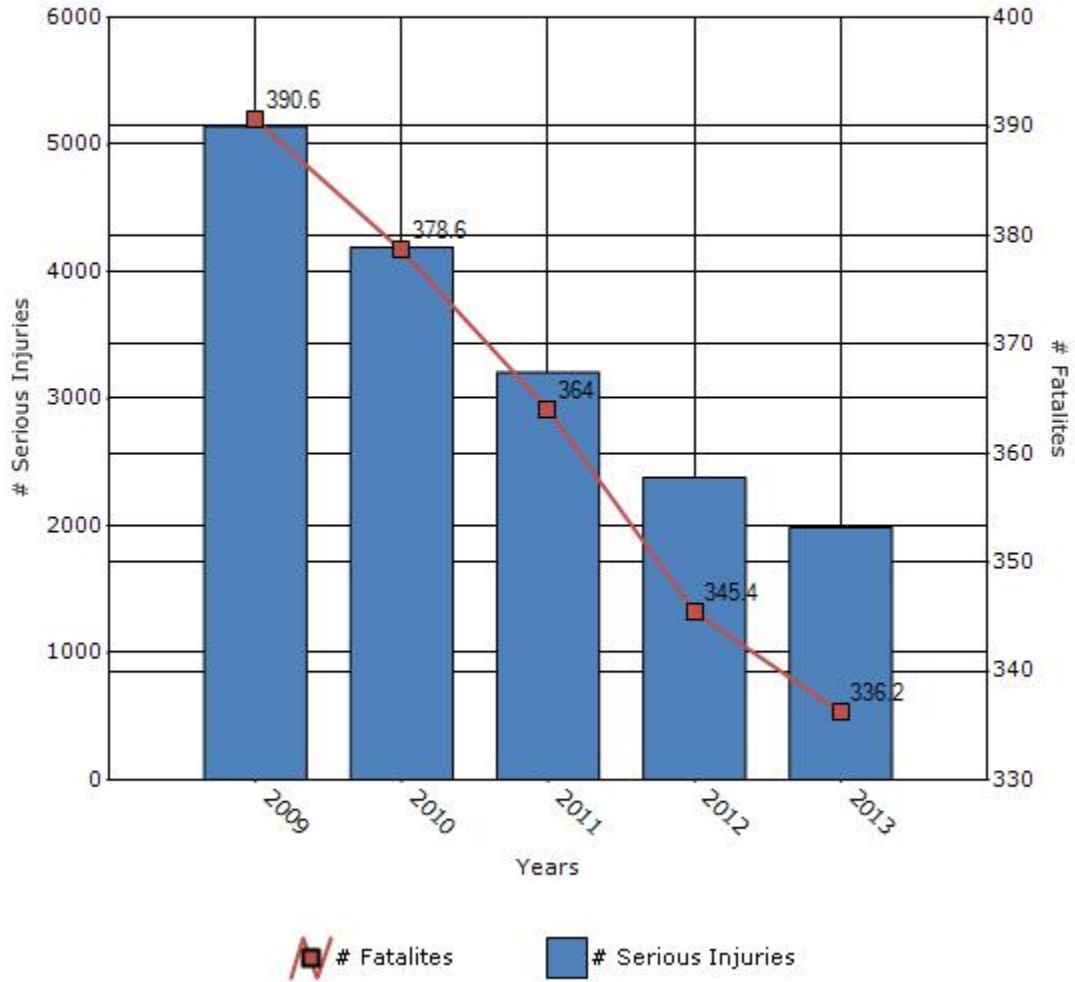
Overview of General Safety Trends

Present data showing the general highway safety trends in the state for the past five years.

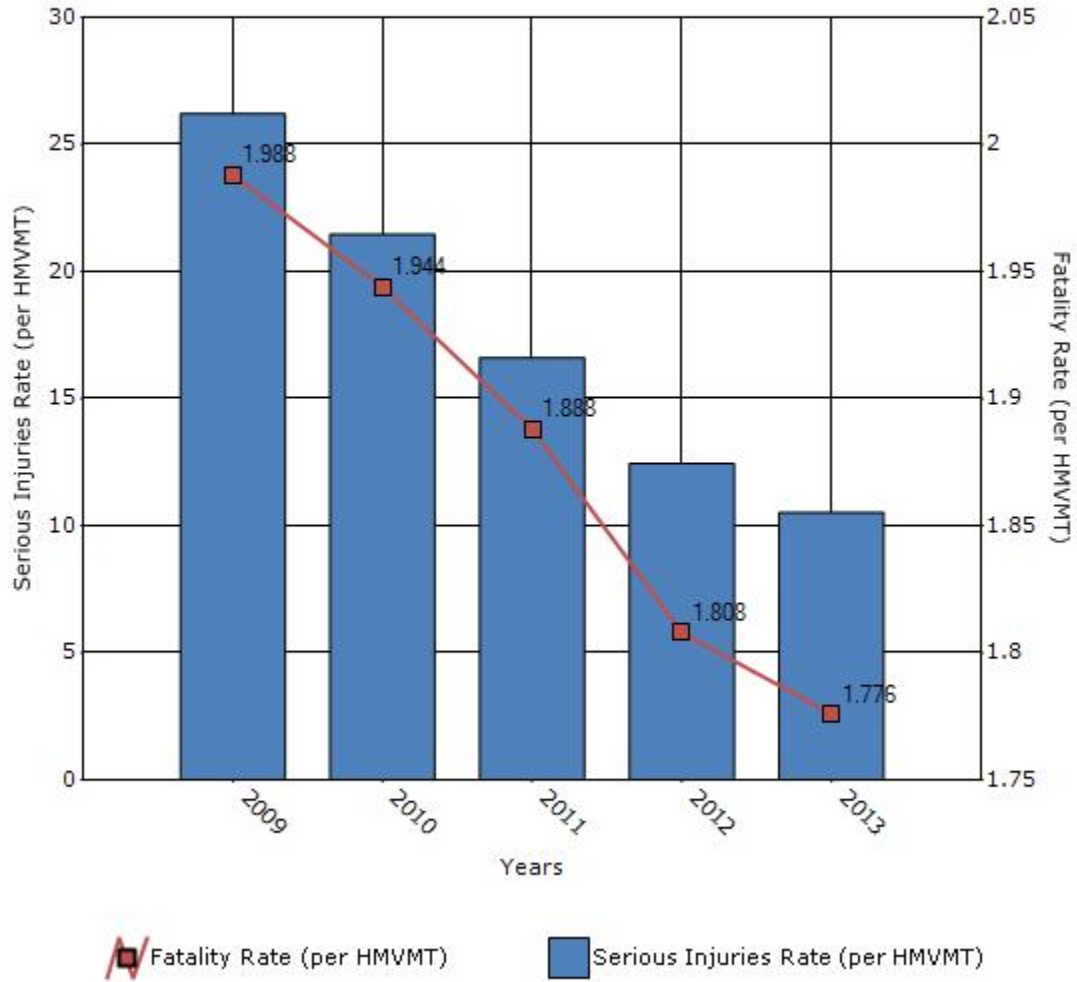
Performance Measures*	2009	2010	2011	2012	2013
Number of fatalities	390.6	378.6	364	345.4	336.2
Number of serious injuries	5143.4	4192	3208	2379	1986.8
Fatality rate (per HMVMT)	1.988	1.944	1.888	1.808	1.776
Serious injury rate (per HMVMT)	26.21	21.47	16.612	12.448	10.526

*Performance measure data is presented using a five-year rolling average.

Number of Fatalities and Serious injuries for the Last Five Years



Rate of Fatalities and Serious injuries for the Last Five Years



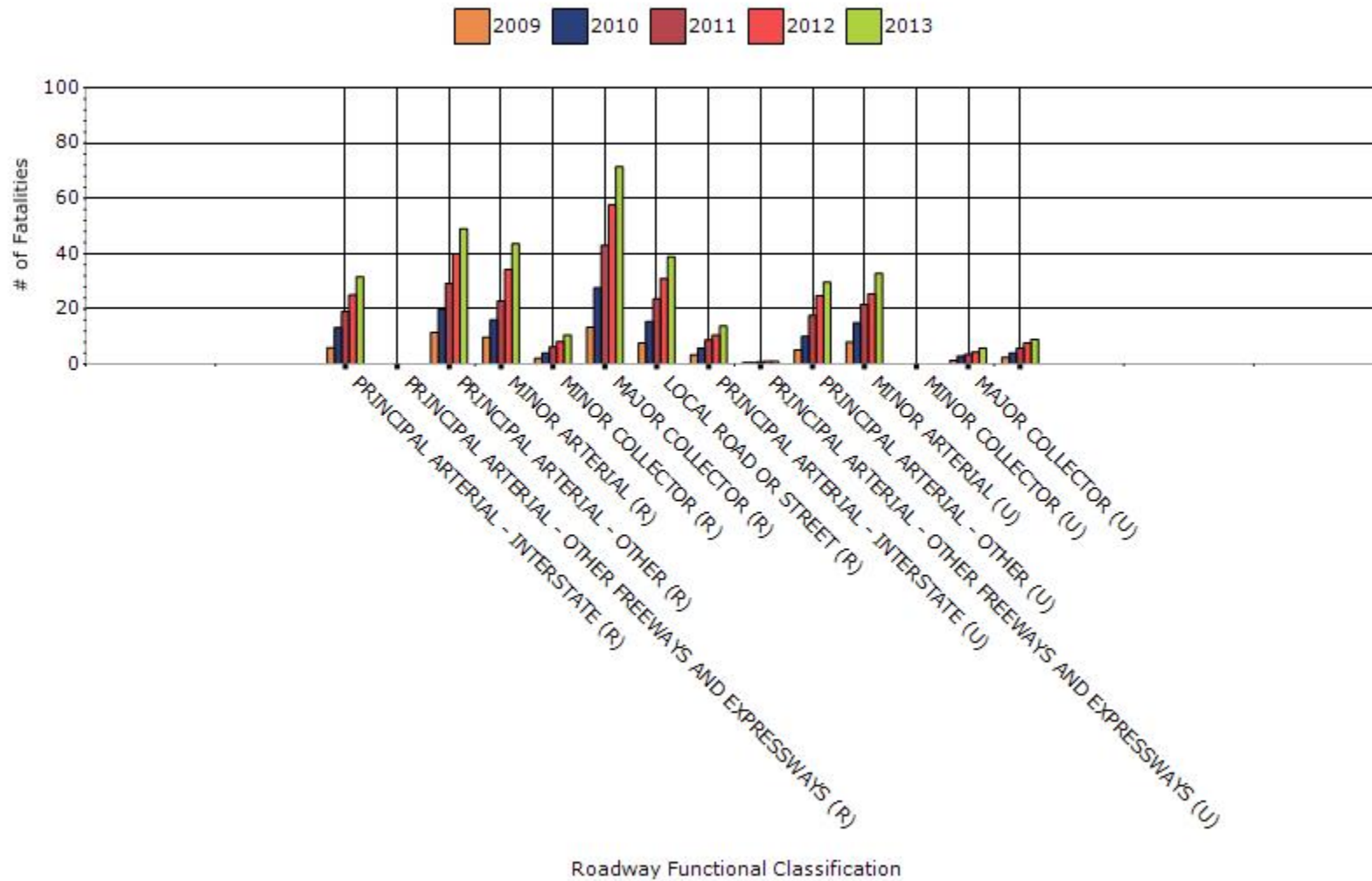
To the maximum extent possible, present performance measure* data by functional classification and ownership.

Year - 2013

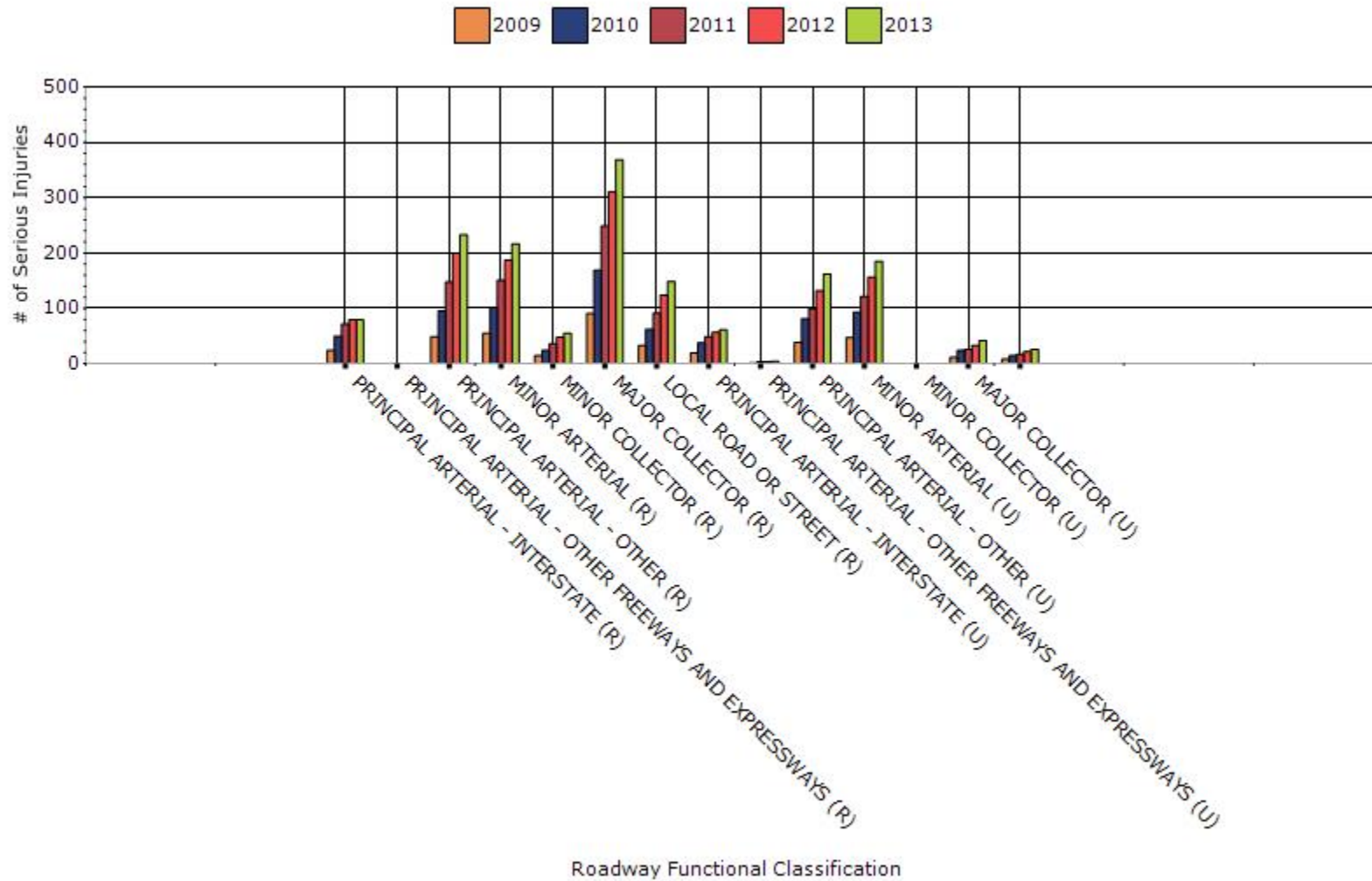
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	31.6	79.4	1.02	2.52
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	49	232.8	1.89	8.96
RURAL MINOR ARTERIAL	43.6	216.6	2.68	13.02
RURAL MINOR COLLECTOR	10.6	54.6	2.8	14.44
RURAL MAJOR COLLECTOR	71.4	368.6	2.52	12.97
RURAL LOCAL ROAD OR STREET	38.8	148.6	3.93	15.05
URBAN PRINCIPAL	13.8	61.4	0.58	2.51

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	1	4.4	1.31	5.78
URBAN PRINCIPAL ARTERIAL - OTHER	29.6	162	1.7	8.73
URBAN MINOR ARTERIAL	32.8	185	1.72	9.53
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	5.8	41.6	0.91	6.33
URBAN LOCAL ROAD OR STREET	9	26	4.38	11.57

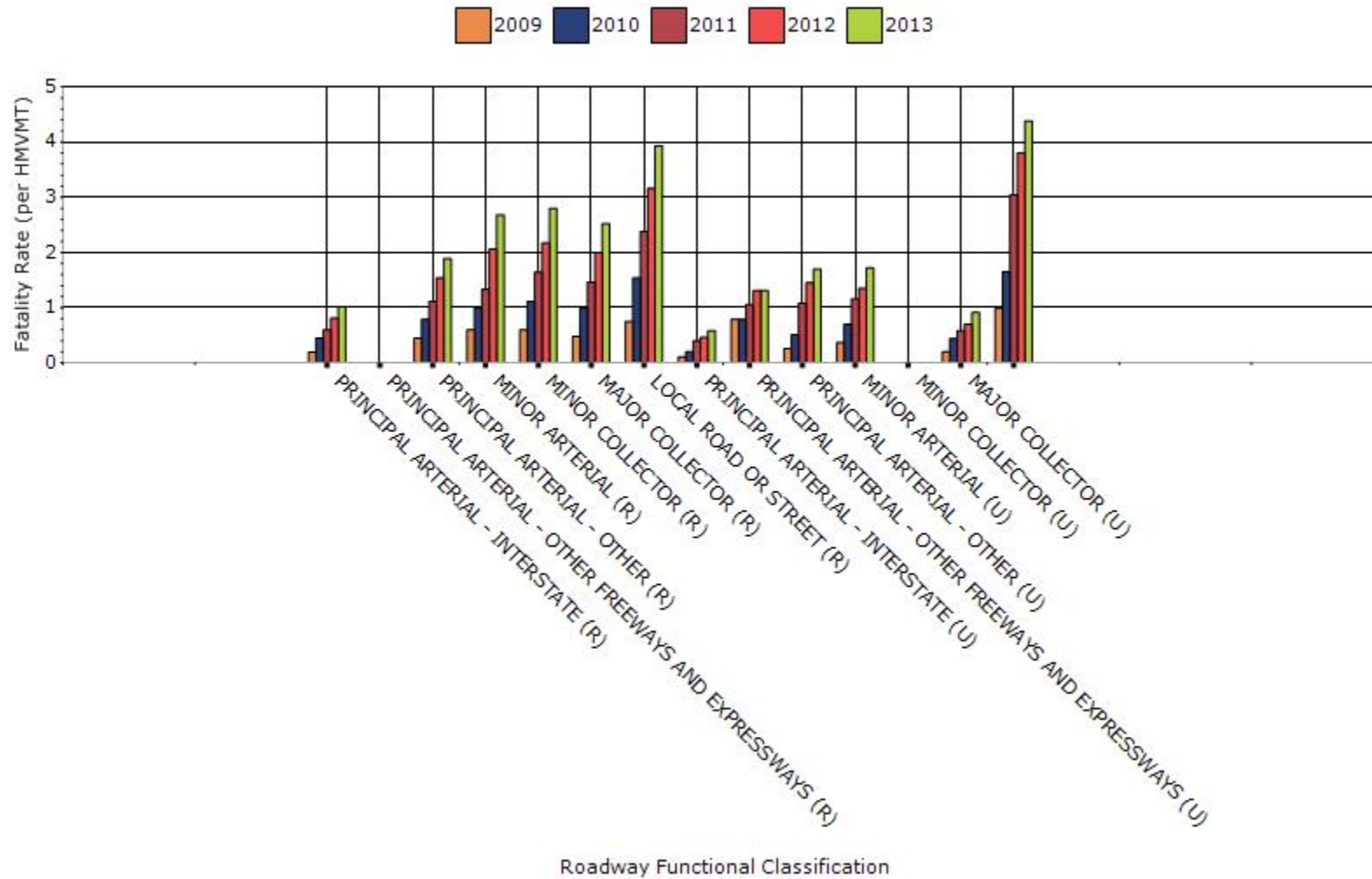
Fatalities by Roadway Functional Classification



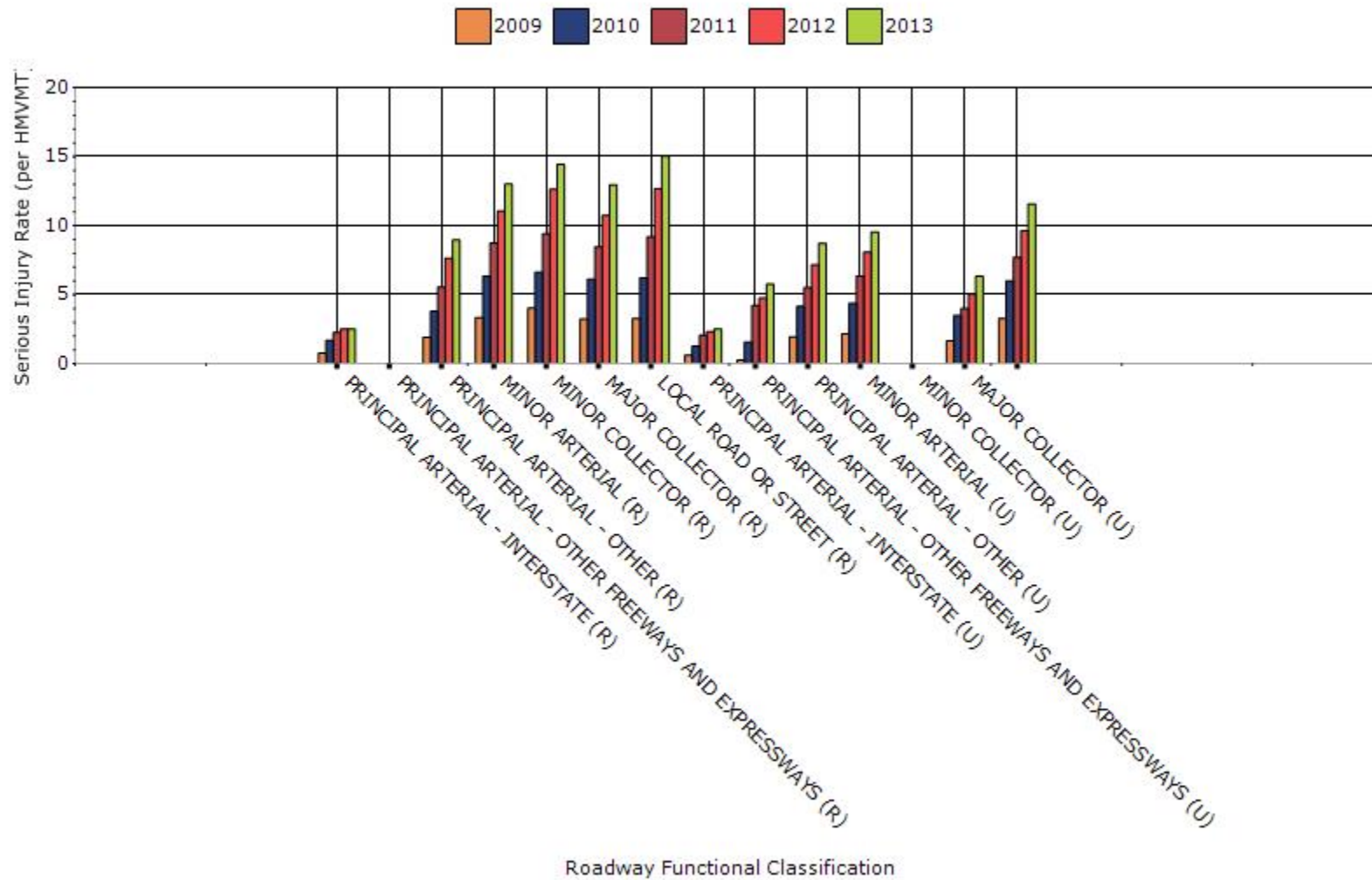
Serious Injuries by Roadway Functional Classification



Fatality Rate by Roadway Functional Classification



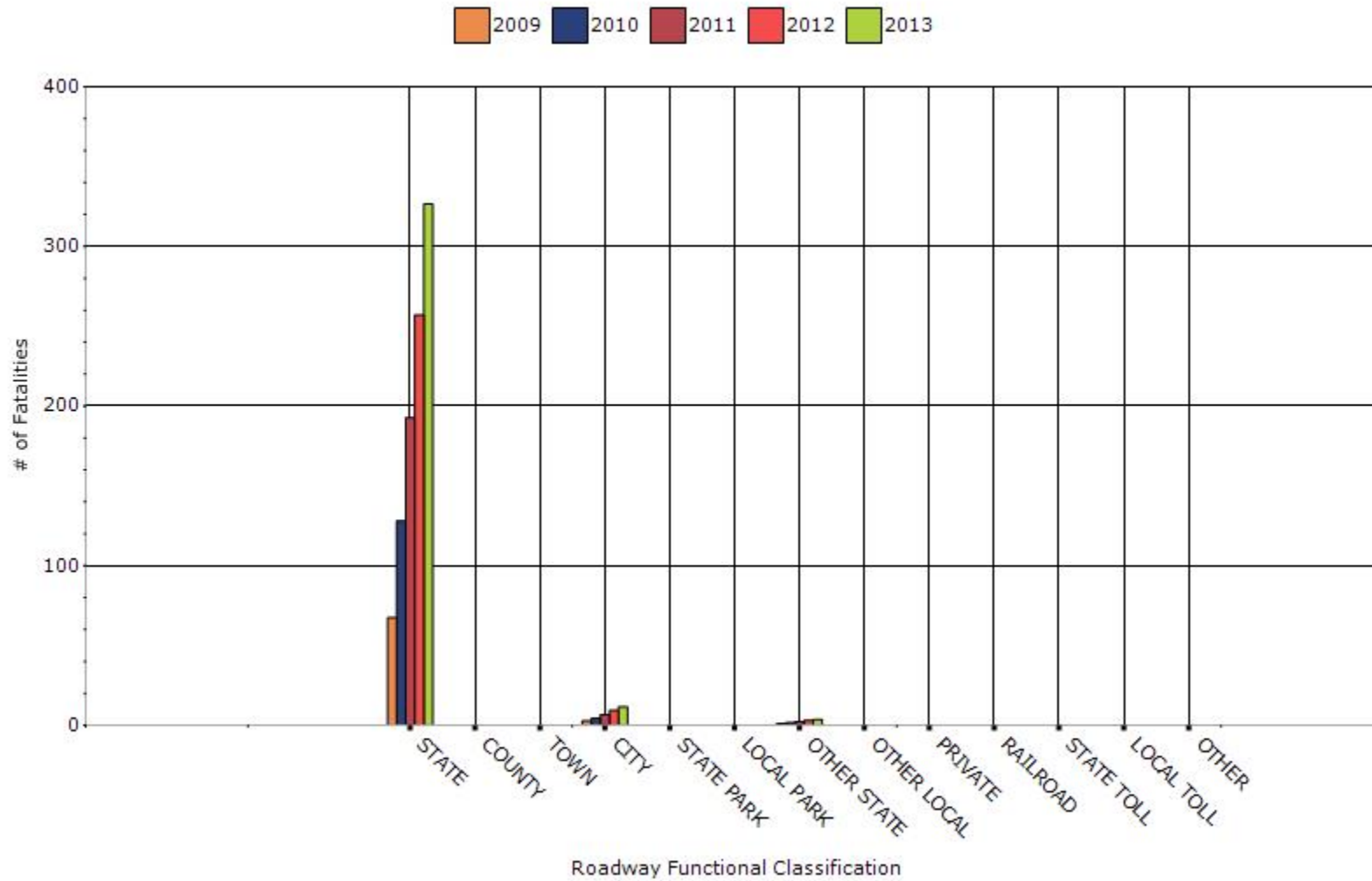
Serious Injury Rate by Roadway Functional Classification



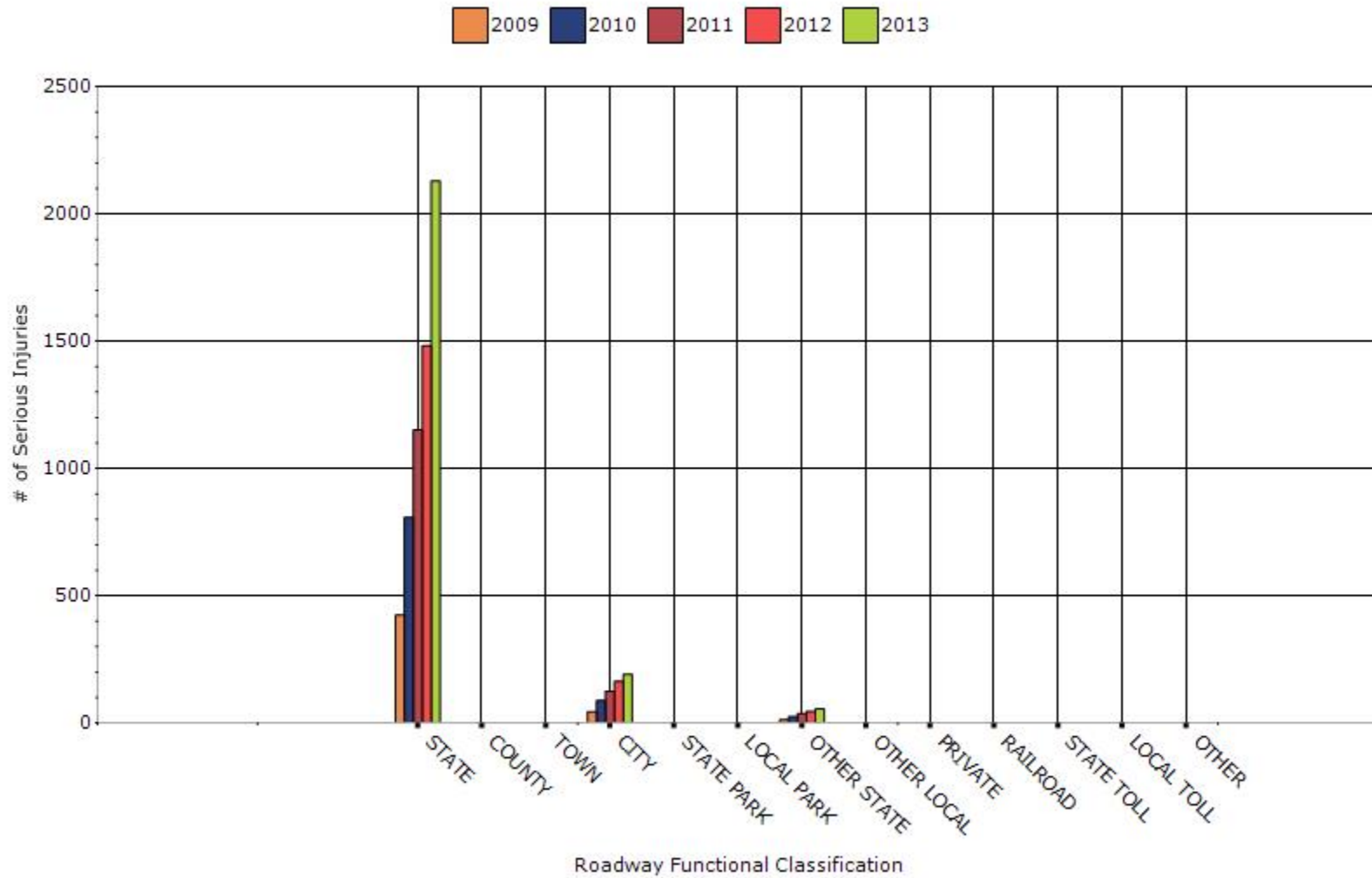
Year - 2013

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	326.6	2129	1.74	11.32
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	11.6	191	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY	0	0	0	0
LOCAL PARK, FOREST OR RESERVATION AGENCY	0	0	0	0
OTHER STATE AGENCY	3.8	55.2	0	0
OTHER LOCAL AGENCY	0	0	0	0
PRIVATE (OTHER THAN RAILROAD)	0	0	0	0
RAILROAD	0	0	0	0
STATE TOLL AUTHORITY	0	0	0	0
LOCAL TOLL AUTHORITY	0	0	0	0
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)	0	0	0	0

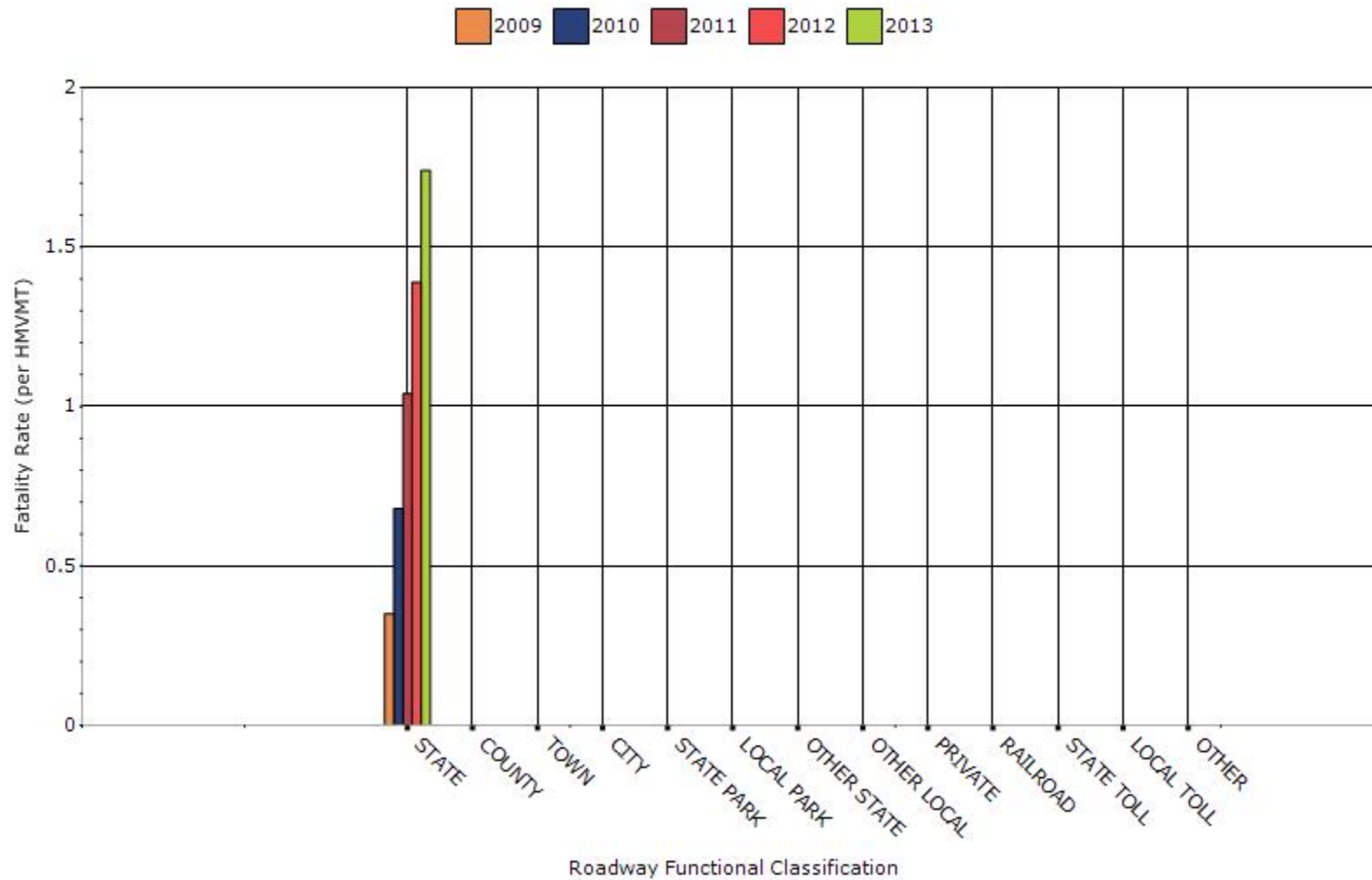
Number of Fatalities by Roadway Ownership



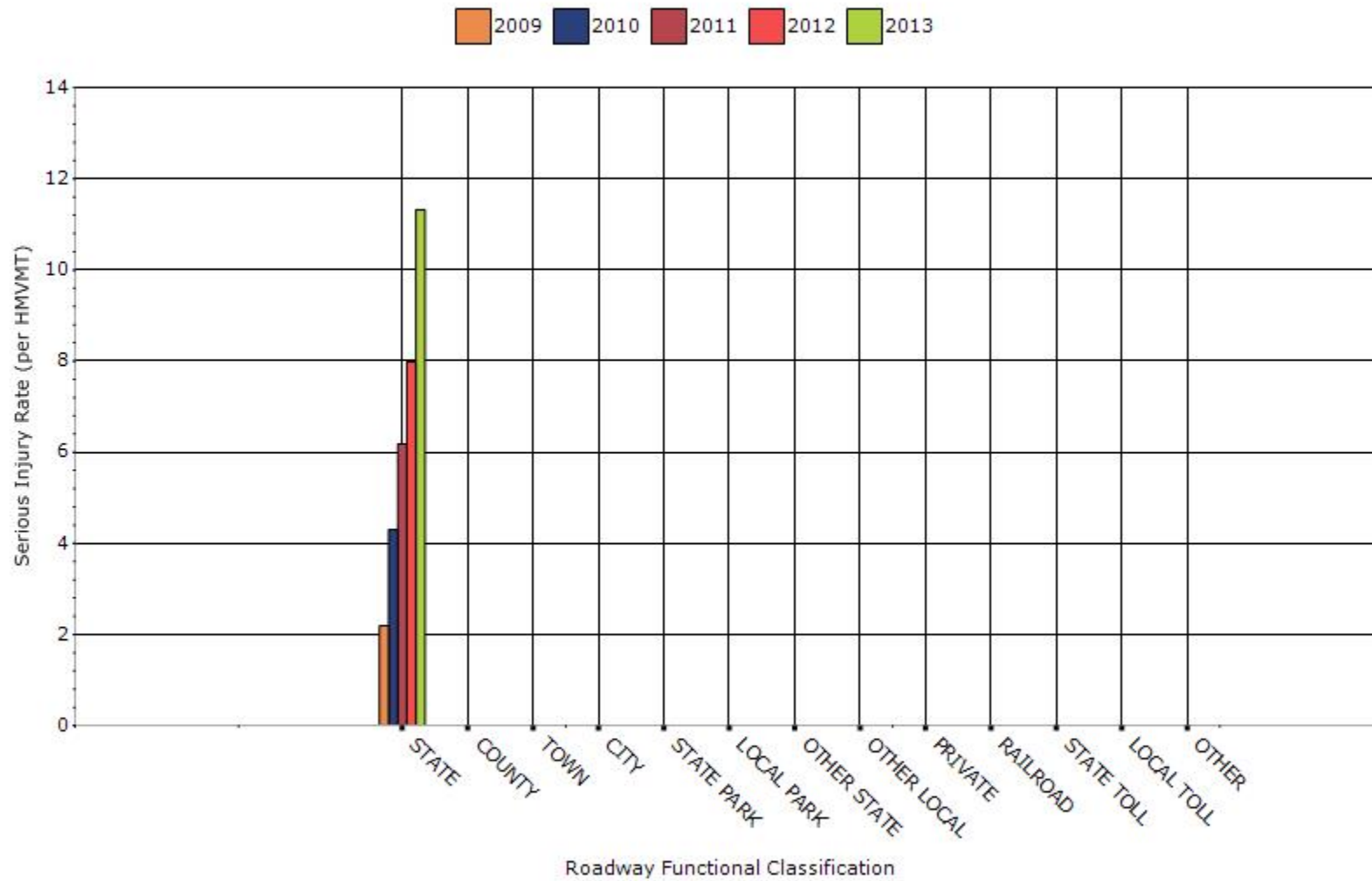
Number of Serious Injuries by Roadway Ownership



Fatality Rate by Roadway Ownership



Serious Injury Rate by Roadway Ownership



Describe any other aspects of the general highway safety trends on which you would like to elaborate.

West Virginia has seen the number of fatalities decrease since 2009 but during the past three years, it has remained generally constant. The number of serious injuries has decreased over the past five years. In 2009, there were 2,403 serious injuries. By 2013, the number has decreased to 1,506.

The fatality rate has remained constant for the past five years. In 2009, it was 1.80 per HMVMT and in 2013 it was 1.76 per HMVMT

Application of Special Rules

Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

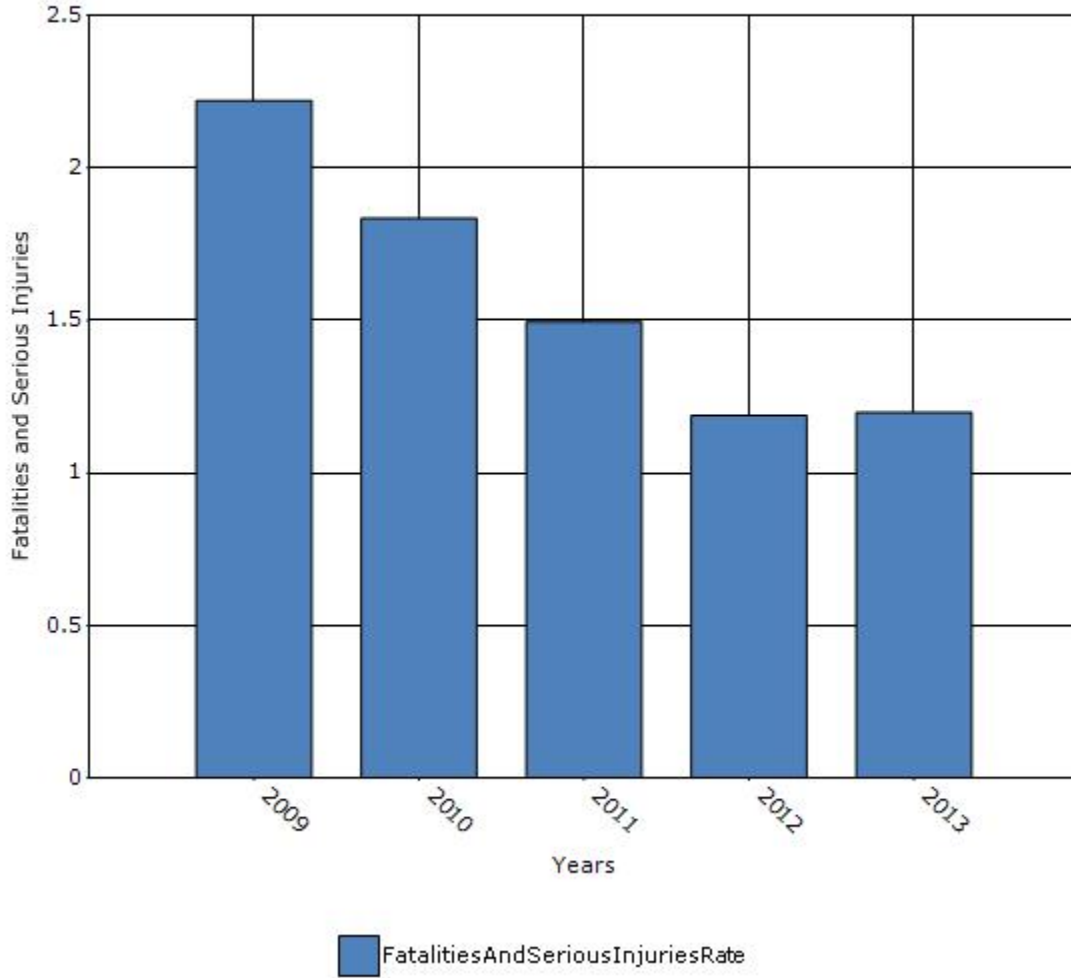
Older Driver Performance Measures	2009	2010	2011	2012	2013
Fatality rate (per capita)	0.298	0.296	0.308	0.3	0.276
Serious injury rate (per capita)	1.92	1.536	1.186	0.886	0.92
Fatality and serious injury rate (per capita)	2.22	1.834	1.496	1.188	1.198

*Performance measure data is presented using a five-year rolling average.

The data provided to the HSIP last year was incorrect. Injuries received by those Drivers and Pedestrians Age 65+ who involved in fatal crashes instead of just fatalities which created a double counting of Serious Injuries of those drivers and pedestrians.

In 2012 the population of people in West Virginia Age 65 or older was 168,000. In that year there were 50 fatalities for people 65 and older. The annual per capatal rate fatalities of drivers 65 and older is 50 divided by 168.

Rate of Fatalities and Serious injuries for the Last Five Years



Does the older driver special rule apply to your state?

No

Assessment of the Effectiveness of the Improvements (Program

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program?

- None
- Benefit/cost
- Policy change
- Other: Other-Significant reduction in traffic fatalities and incapacitating injuries

What significant programmatic changes have occurred since the last reporting period?

- Shift Focus to Fatalities and Serious Injuries
- Include Local Roads in Highway Safety Improvement Program
- Organizational Changes
- None
- Other:

Briefly describe significant program changes that have occurred since the last reporting period.

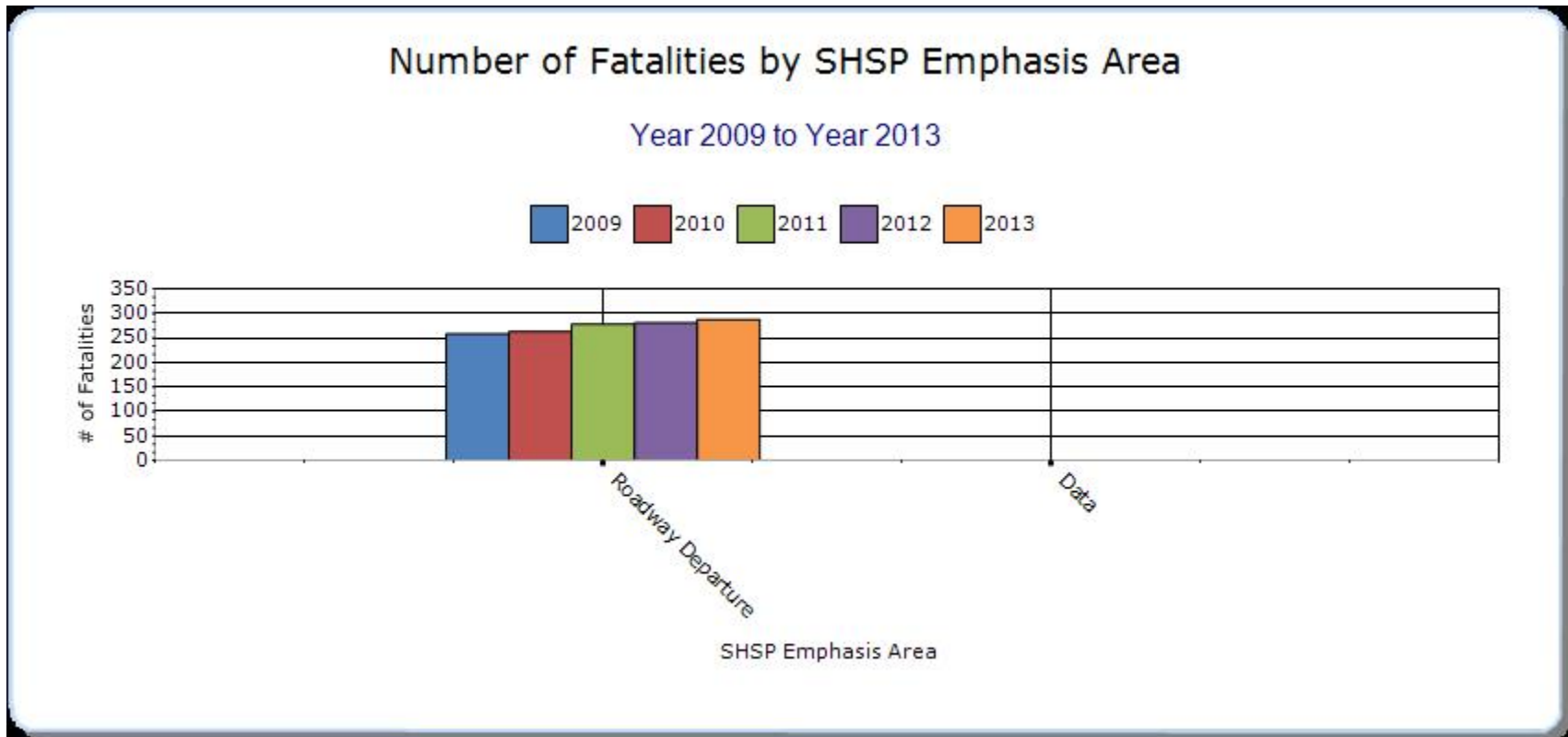
None

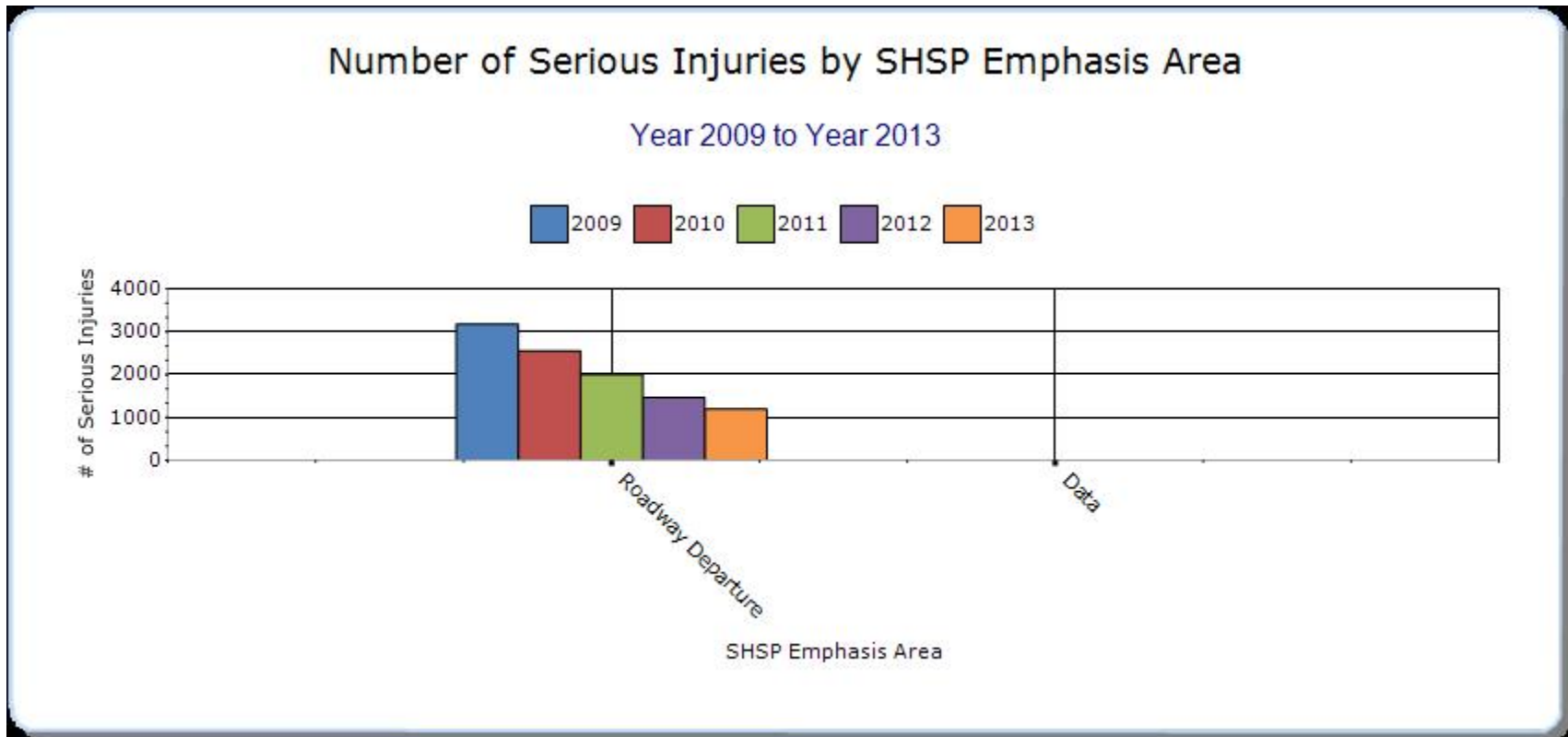
SHSP Emphasis Areas

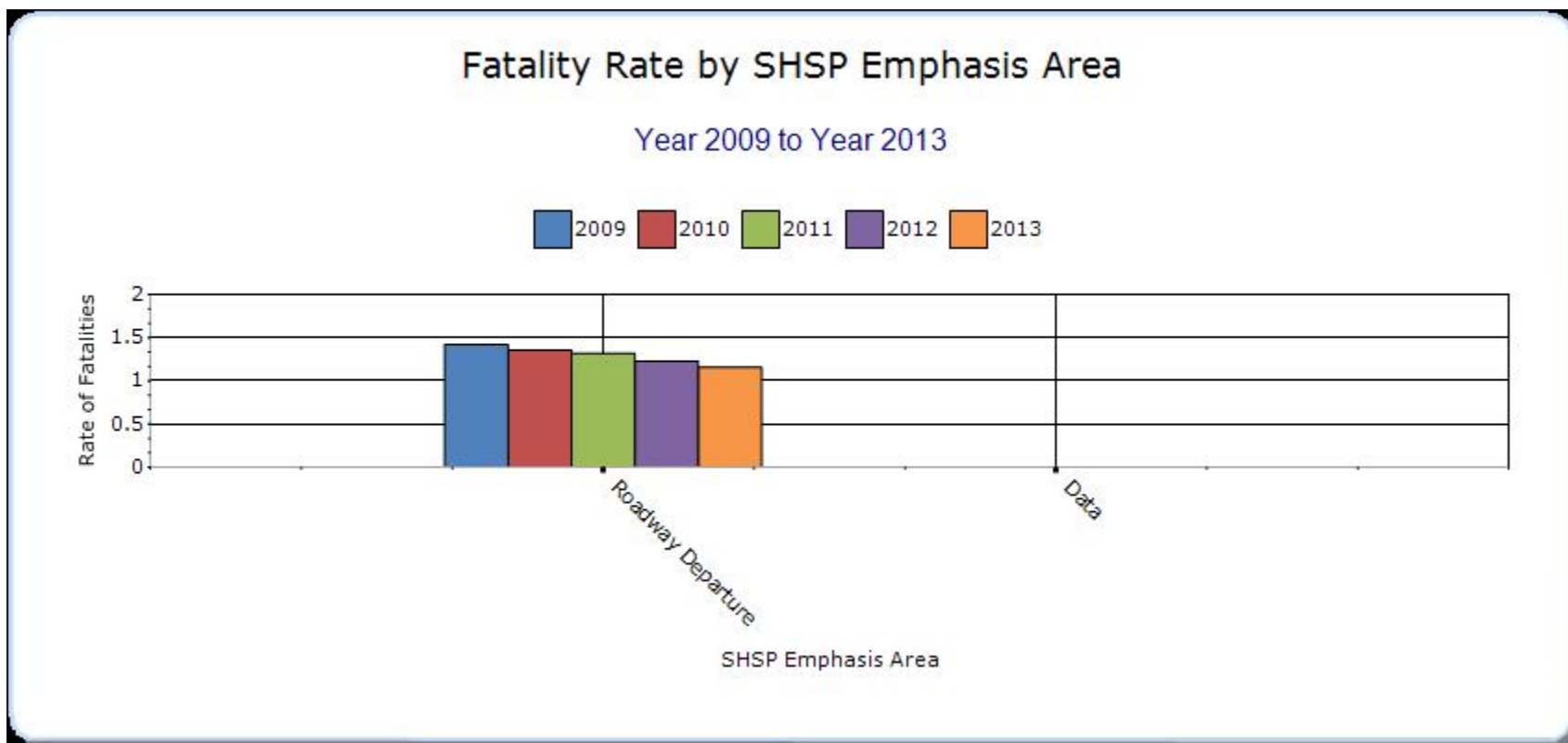
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

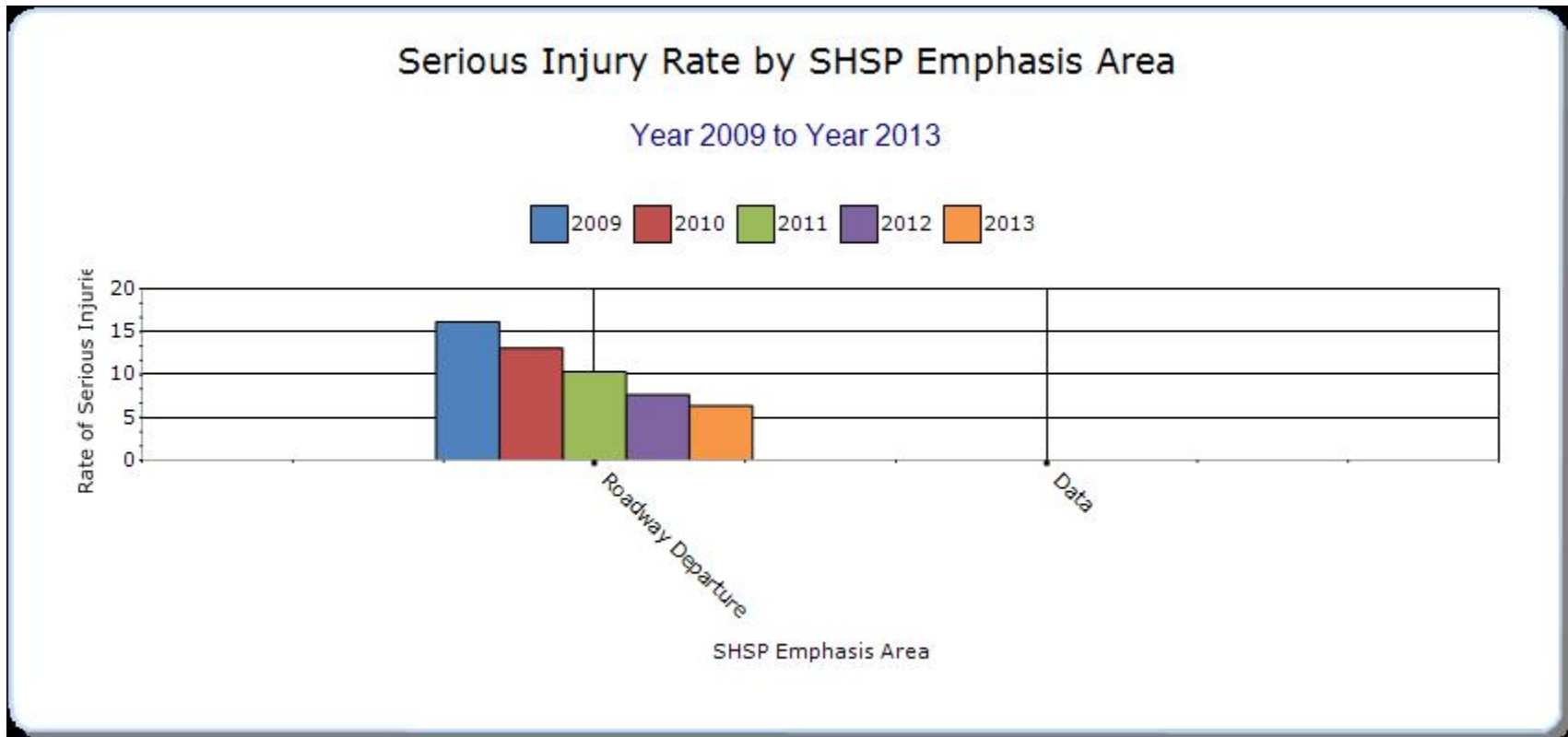
Year - 2013

HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Roadway Departure		287.8	1202.6	1.16	6.35	0	0	0
Data		0	0	0	0	0	0	0







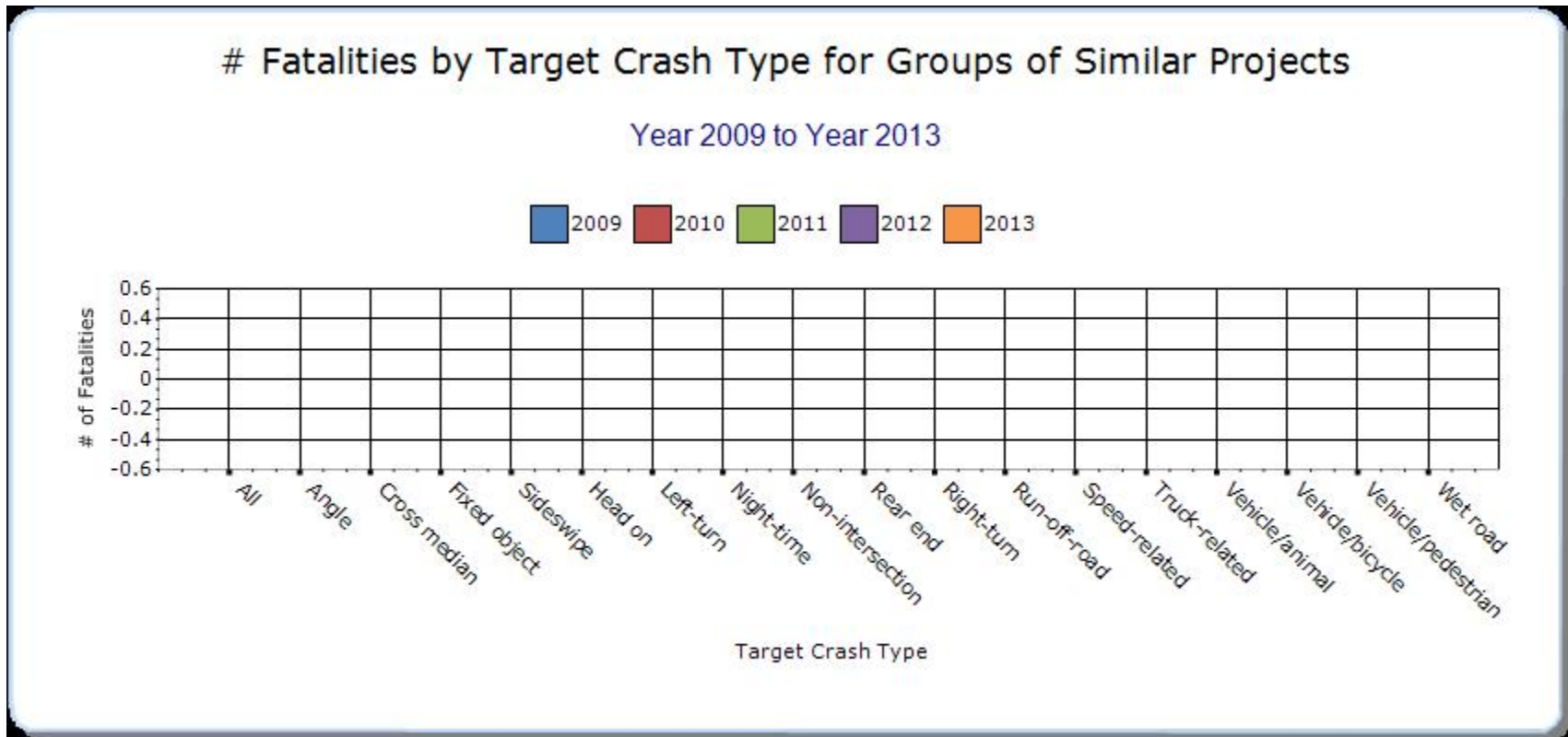


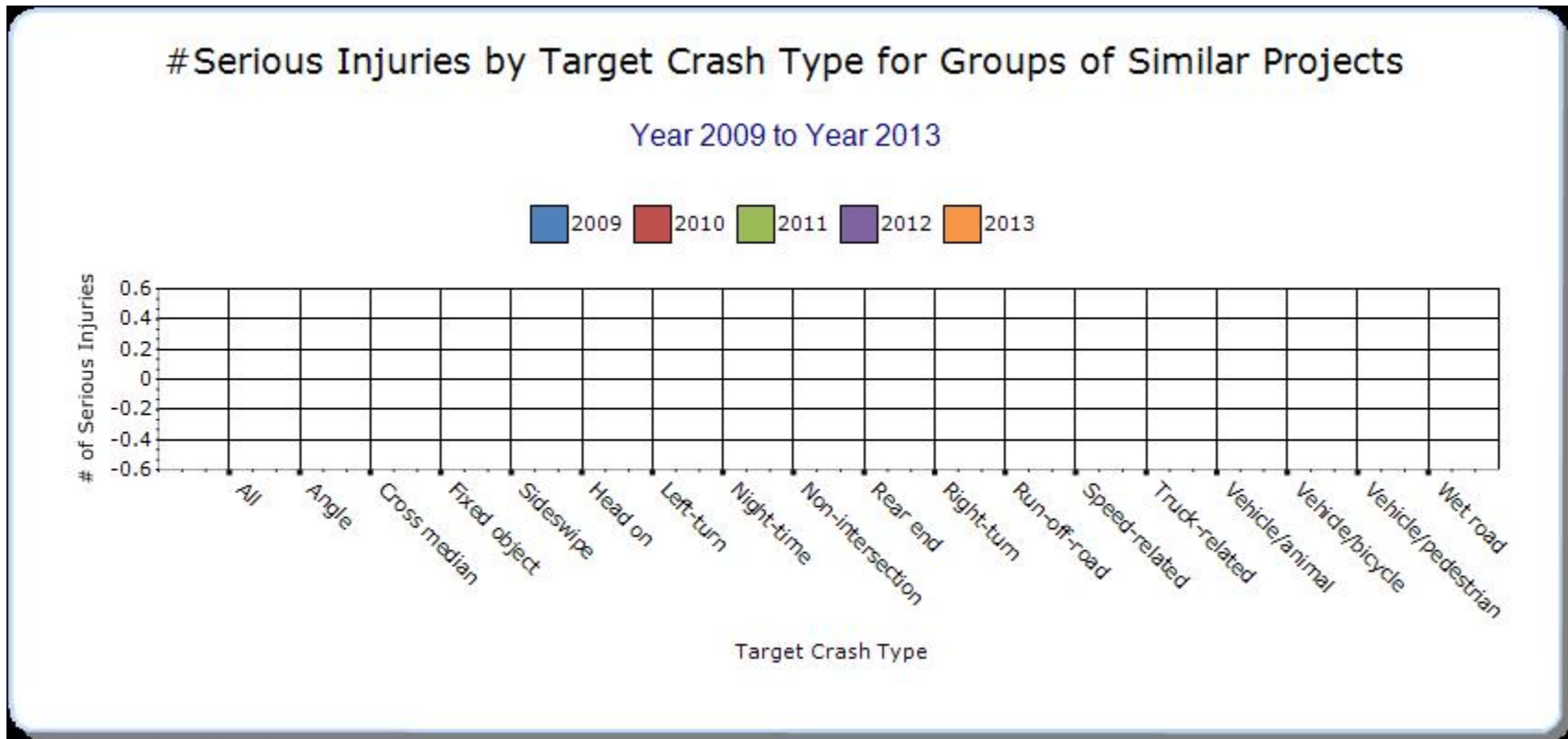
Groups of similar project types

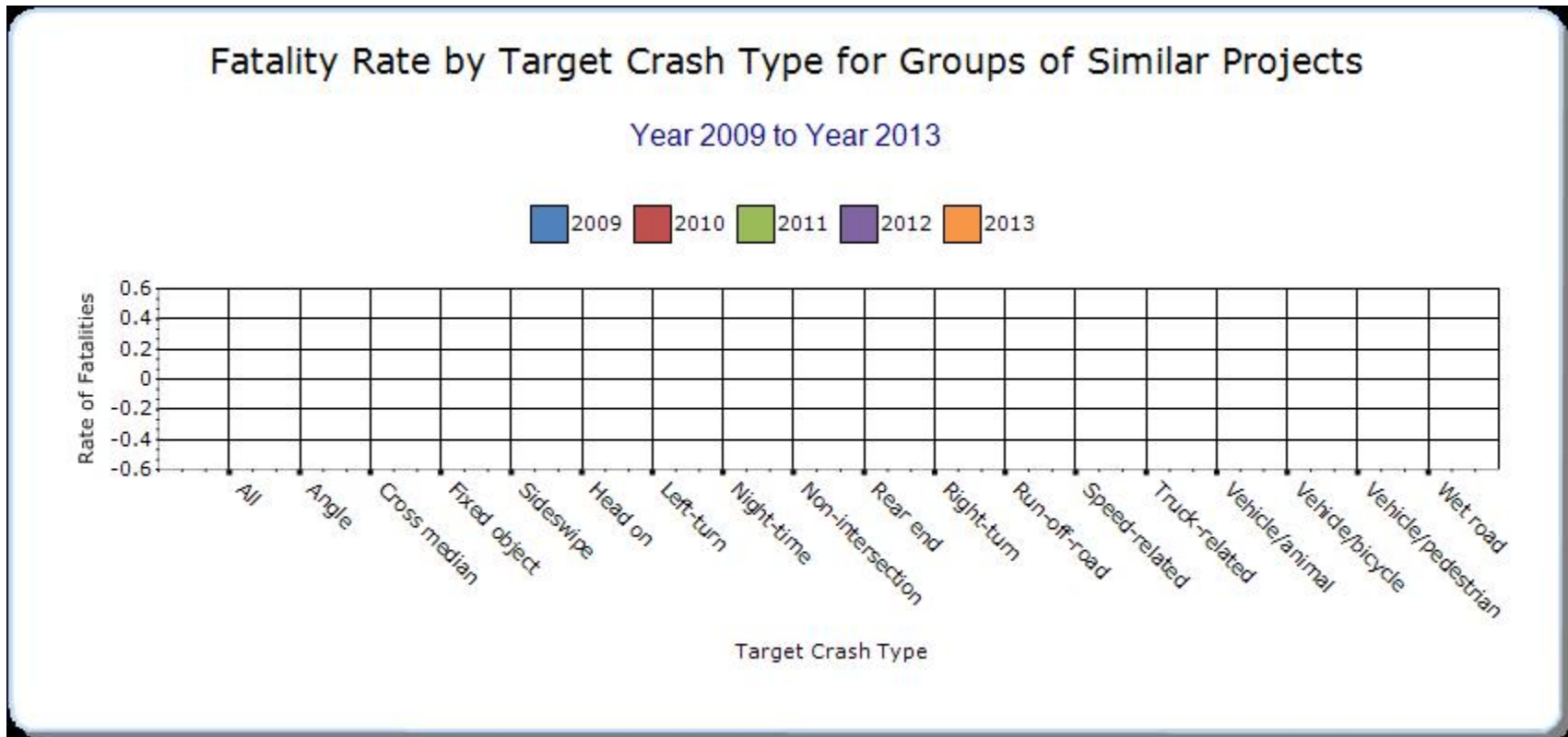
Present the overall effectiveness of groups of similar types of projects.

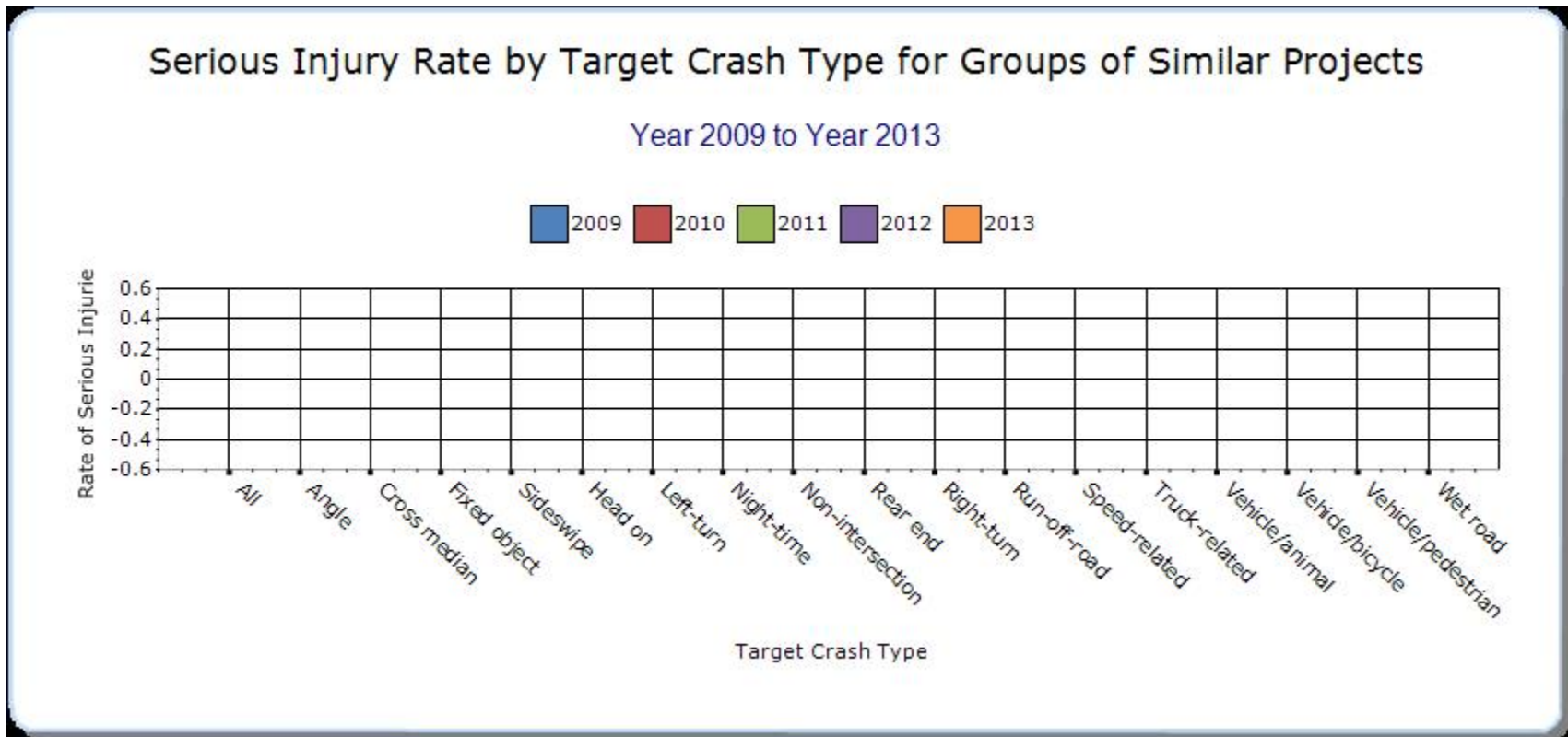
Year - 2013

HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Roadway Departure		219	1202.6	1.16	6.35	0	0	0









Systemic Treatments

Present the overall effectiveness of systemic treatments.

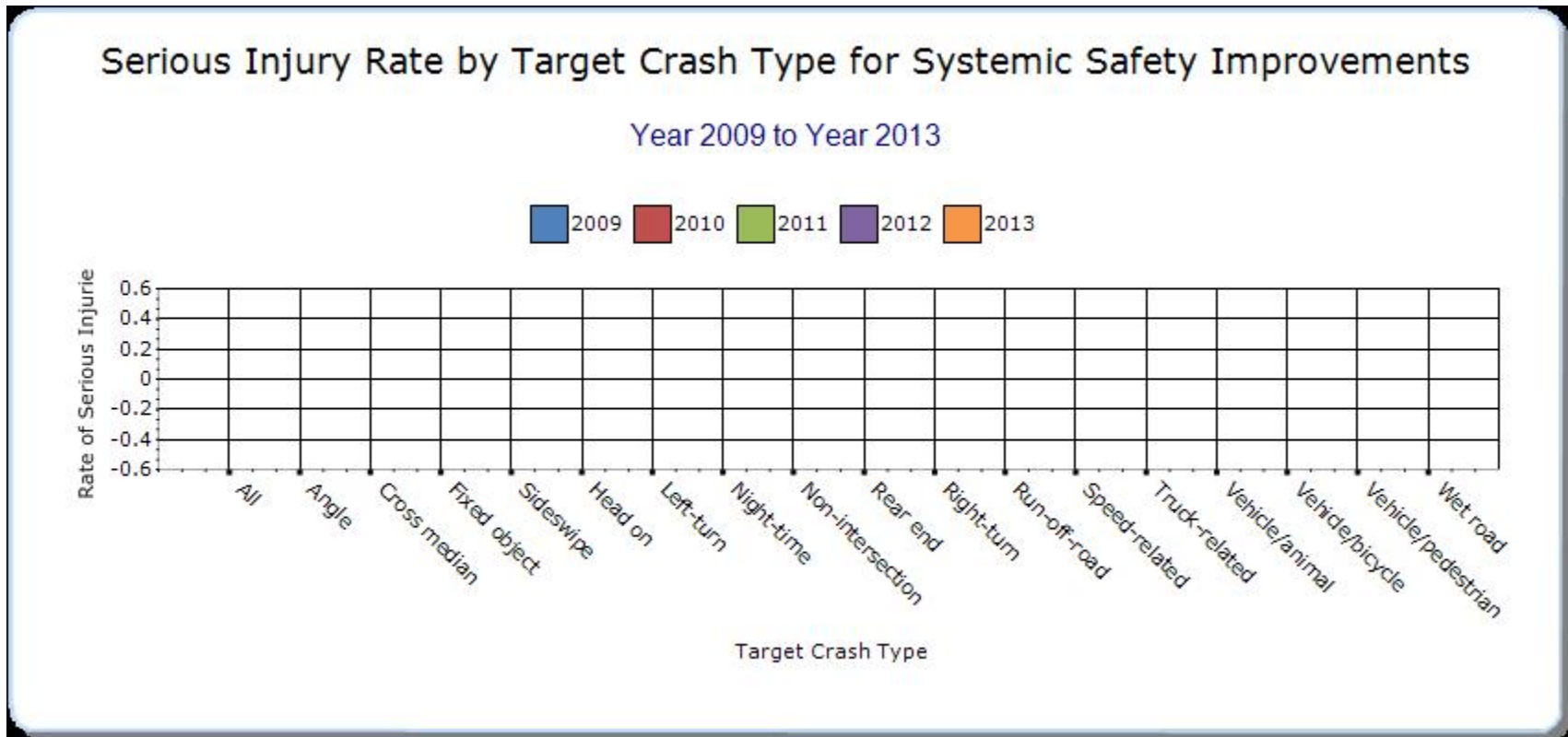
Year - 2013

Systemic improvement	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Add/Upgrade/Modify/Remove Traffic Signal		336.2	1992.8	1.78	10.52	0	0	0
Install/Improve Signing		336.2	1992.8	1.78	10.52	0	0	0









Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

The number of fatalities has generally decreased between 2009 and 2013. In 2009, there were 357 fatalities and it decreased to 315 in 2010. The number has increased but has remained steady for the past three years. The number of serious injuries has decreased between 2009 and 2013. In 2009, there were 2,403 serious injuries. By 2013, this number has decreased to 1,506.

The fatality rate has remained constant between 2009 and 2013. In 2009, the fatality rate was 1.80 per HMVMT. In 2013, the fatality rate was 1.76 per HMVMT. However the serious injury rate has decreased between 2009 and 2013. In 2009, the serious injury rate was 12.15. By 2013, the serious injury rate had decreased to 7.98.

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-Other Injury	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-Other Injury	Aft-PDO	Aft-Total	Evaluation Results (Benefit/Cost Ratio)
Wood County WV 47	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	1	6	7	0	2	2	5	9	+28.57%
Logan County US 119	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	1	5	5	14	25	0	1	8	10	19	-24.00%
Berkeley County US 11	Urban Major Collector	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	7	29	36	0	0	2	18	20	-44.44%
Berkeley County WV 45	Urban Major Collector	Intersection traffic control	Modify traffic signal - modernization/replacement	0	1	0	2	3	0	0	2	8	10	+233.33%
Boone County US 119	Rural Principal Arterial - Other	Roadside	Barrier - cable	3	21	46	96	166	1	8	22	109	140	-15.66%

Hancock County WV 105	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	4	2	6	0	0	0	3	3	-50.00%
Mercer County WV 20	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	0	1	1	0	0	0	3	3	+200.00%
Raleigh County WV 41	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	11	20	31	0	0	1	22	23	-25.81%
Boone County WV 85	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	7	5	12	0	2	5	16	23	+91.67%
Monongalia County US 19	Rural Major Collector	Intersection traffic control	Modify traffic signal - modernization/replacement	0	1	4	8	13	0	1	0	8	9	-30.77%
Fayette County WV 16	Rural Major Collector	Roadway	Pavement surface - miscellaneous	1	1	6	14	22	0	0	0	3	3	-86.36%
Kanawha County US 60	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	9	21	25	55	0	0	4	19	23	-55.18%
Harrison County	Urban Minor	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspeci	0	0	0	0	0	0	0	0	0	0	0.00%

WV 279	Arterial		fied											
Ohio County I-70	Urban Principal Arterial - Interstate	Roadside	Barrier - cable	0	7	18	78	103	1	0	12	63	76	-26.21%
Hampshire County US 50	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	0	4	4	0	0	0	0	0	-400.00%
Putnam County US 35	Rural Principal Arterial - Other	Intersection traffic control	Intersection flashers - add advance intersection warning sign-mounted	1	0	3	8	12	0	0	2	6	8	-33.33%
Jefferson County US 340	Urban Principal Arterial - Other	Intersection traffic control	Intersection flashers - add advance intersection warning sign-mounted	0	0	0	0	0	0	0	0	0	0	0.00%

Optional Attachments

Sections

Files Attached

Glossary

5 year rolling average means the average of five individual, consecutive annual points of data (e.g. annual fatality rate).

Emphasis area means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.

Highway safety improvement project means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

HMVMT means hundred million vehicle miles traveled.

Non-infrastructure projects are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

Older driver special rule applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

Performance measure means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

Programmed funds mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

Roadway Functional Classification means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

Strategic Highway Safety Plan (SHSP) means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systemic safety improvement means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

Transfer means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.